

V. REMARKS

Claims 1, 4 and 16-23 are rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No: 6,099,687 to Yamazaki in view of U.S. Patent No. 5,006,192 to Deguchi and U.S. Patent No. 6,302,964 to Umotoy et al. The rejection is respectfully traversed.

Yamazaki teaches an etching system for plasma-etching a thin film over an insulating substrate of more than 8 inches in diameter or forming a rectangle having a size of 200 mm or more on each side thereof. The etching system includes an agitating electric field system and an agitating magnetic field system disposed besides an etching power source. The agitating electric field system has agitating electrodes disposed around a plasma reaction space so as to be able to apply an electric field in parallel to a surface of the insulating substrate and agitating power sources connected to the agitating electrodes via amplifiers. The agitating magnetic field system has agitating magnets disposed around the plasma reaction space so as to be able to apply a magnetic field in parallel to the surface of the insulating substrate.

Deguchi discloses an apparatus for treating wafers utilizing a plasma produced by a gas discharge that includes an electrically conductive, grounded vacuum vessel, a main electrode, an opposing electrode, means for supporting a wafer, means for introducing a gas into the vacuum vessel, a high voltage source and means for selectively alternatively electrically connecting the limiter electrode to the ground terminal. The means for supporting a wafer is disposed on one of the main and opposing electrodes and a limiter electrode is disposed between the main and opposing electrodes. The main, opposing, and limiter electrodes are disposed within the vacuum vessel and generally enclose a first discharge space and define a second discharge space outside the first discharge space within the vacuum vessel. The high voltage source has a high voltage terminal and a ground terminal for forming a high voltage electrical field in the first discharge space and generates a plasma in the first discharge space in a gas introduced into the vacuum vessel. One of the main and opposing electrodes is electrically connected to the high voltage terminal and the other

of the main and opposing electrodes is electrically connected to the ground terminal. The means for selectively alternatively electrically connecting the limiter electrode to the ground terminal generates the plasma in the first discharge space and to the high voltage terminal for generating a plasma in the first and second discharge spaces.

Umotoy teaches a one-piece dual gas faceplate for a showerhead in a semiconductor wafer processing system. The one-piece gas distribution faceplate includes a first surface, a second surface, and a third surface. The one-piece gas distribution faceplate includes a plurality of first gas holes extending through the one-piece gas distribution faceplate between the first surface and the second surface. The one-piece gas distribution faceplate has an internal gas distribution cavity defined by a plurality of interconnecting channels. A plurality of second gas holes extend through the one-piece gas distribution faceplate between the first surface into a plurality of the interconnecting channels. The interconnecting channels are fluidly coupled to a plenum that is in turn connected to at least one gas conduit. The gas conduit extends to the third surface.

Claims 1 and 20 are directed to an apparatuses for forming a thin film. Claims 1 and 20 recite that a film-forming gas is supplied from a gas supplying device to a vacuum container. Claims 1 and 20 also recite that the gas supplying device includes a duct system, a gas supply member having a hollow plate member with a gas supply surface portion and a cover air-tightly covering the hollow plate member opposite the gas supply surface portion with the gas supply surface portion being opposed to a film-forming surface of the article to be film-covered disposed on the supporting member in the vacuum container.

Claims 1 and 20, as amended, further recite that the duct system includes a hollow gas guide member, a first gas duct and a second gas duct such that the hollow gas guide member extends into the vacuum container and terminates in the air-tight gas-receiving compartment, the first gas duct and the second gas duct supply the film-forming gas from a film-forming gas source to the vacuum container, the first gas duct is in fluid communication with the hollow gas guide member so that the hollow gas guide member supplies the film-forming gas to the air-tight gas-receiving compartment

and the second gas duct extends through and is in fluid isolation from the hollow gas guide member and the air-tight gas-receiving compartment and terminates in the hollow internal space for supplying the film-forming gas thereto.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claims 1 and 20 as amended. Specifically, it is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests a duct system that includes a hollow gas guide member, a first gas duct and a second gas duct such that the hollow gas guide member extends into the vacuum container and terminates in the air-tight gas-receiving compartment, the first gas duct and the second gas duct supply the film-forming gas from a film-forming gas source to the vacuum container, the first gas duct is in fluid communication with the hollow gas guide member so that the hollow gas guide member supplies the film-forming gas to the air-tight gas-receiving compartment and the second gas duct extends through and is in fluid isolation from the hollow gas guide member and the air-tight gas-receiving compartment and terminates in the hollow internal space for supplying the film-forming gas thereto. Thus, it is respectfully submitted that that one of ordinary skill in the art would not be motivated to combine the features of the applied art because such combination would not result in the claimed invention. As a result, it is respectfully submitted that claims 1 and 20 are allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as unpatentable over Yamazaki in view of Deguchi as applied to claim 1 and further in view of Japanese Patent Application Publications 2001-189308 to Fujita et al. The rejection is respectfully traversed.

As indicated above, claim 1 is allowable over Yamazaki and Deguchi. Fujita fails to cure the deficiencies of Yamazaki and Deguchi. As a result, it is respectfully submitted that claim 1 is allowable over the combination of these references.

Claims 4 and 16 depend from claim 1 and include all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite.

Withdrawal of the rejection is respectfully requested.

Further, Applicants assert that there are also reasons other than those set forth above why the pending claims are patentable. Applicants hereby reserve the right to submit those other reasons and to argue for the patentability of claims not explicitly addressed herein in future papers.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance; the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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Enclosure(s): Amendment Transmittal

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